

# Maryland's Stormwater Management Program

## Program History

1982	Stormwater Management Act passed by Maryland General Assembly.
1983	Stormwater Management Regulations (COMAR 26.17.02) adopted.
1984	Local ordinances implemented.
1986	Water quality management generally applied across Maryland ("first flush" rule; generally equal to ½ inch of runoff over impervious area).
1993	Goals for modifying the stormwater program established. <ul style="list-style-type: none"><li>▶ Specific guidance for water quality</li><li>▶ Manage more frequent storm events</li><li>▶ Limit number of stormwater management waivers</li><li>▶ Provide incentives for environmentally friendly design</li></ul>
1996	Section 309 & 306 Coastal Zone Management (CZM) Grants awarded for development of new Stormwater Design Manual.
Oct. 1997	First draft of the new Stormwater Design Manual is published (subsequent drafts published in Sept. 1998 and Dec. 1999).
June 16, 2000	Proposed regulatory revisions, including the 2000 Stormwater Design Manual, published in the Maryland Register.
Oct. 2, 2000	Amended regulations and the Design Manual are adopted.
July 1, 2001	Revised program implemented locally.



## Regulatory Changes

- ▶ **2000 Maryland Stormwater Design Manual, Volumes I & II**  
Redevelopment Criteria established:
  - Reduce existing imperviousness by 20%, or
  - Provide water quality treatment for 20%, or
  - A combination of imperviousness reduction and water quality treatment equal to 20%, or
  - Implement a locally approved practical alternative (e.g., fees, off site implementation, watershed or stream restoration, retrofitting)
- ▶ New stormwater management plan content specifications, and
- ▶ New inspection, enforcement, and maintenance responsibilities

*Shallow Wetland BMP*





## MARYLAND DEPARTMENT OF THE ENVIRONMENT

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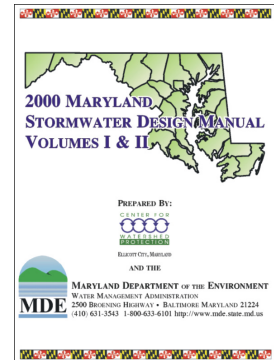
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Robert L. Ehrlich, Jr.  
Governor

Kendl P. Philbrick  
Secretary

### 2000 Maryland Stormwater Design Manual

- ▶ Developed with three distinct goals:
  - Protect waters of the State from adverse impacts of urban stormwater runoff,
  - Provide design guidance on the most effective nonstructural and structural best management practices (BMPs) for development, and
  - Improve the quality of BMPs constructed, specifically w/respect to performance, longevity, safety, maintenance, community acceptance, and environmental benefits.
- ▶ Divided into two volumes:
  - Volume I contains basic technical information for stormwater design in Maryland.
  - Volume II contains appendices with supporting information (e.g., landscaping, construction specifications, design examples, and miscellaneous tools).
- ▶ Unified Sizing Criteria (Ch. 2): Five criteria that are designed to meet specific pollutant removal goals, maintain groundwater recharge, reduce channel erosion, prevent overbank flooding, and pass extreme flood events.
- ▶ Design Criteria for BMPs (Ch. 3): Performance standards for five groups of structural BMPs addressing feasibility, conveyance, pretreatment, geometry, environmental and landscaping requirements, and maintenance concerns.
- ▶ BMP Selection and Location (Ch. 4): Guidance for selecting BMPs based on watershed, terrain, physical feasibility, community, environment, location, and permitting factors as well as treatment suitability.
- ▶ Innovative Site Planning (Ch. 5): Criteria for nonstructural site design techniques that reduce the generation of stormwater runoff thereby reducing reliance on structural BMPs.



### Environmental Incentives and Credits

A number of incentives encourage the use of the following nonstructural practices:

- ▶ Natural Area Conservation – helps to retain pre development hydrologic and water quality characteristics
- ▶ Disconnection of Rooftop Runoff – promotes groundwater recharge and overland filtering
- ▶ Disconnection of Non-Rooftop Runoff – reduces stormwater runoff and increases groundwater recharge
- ▶ Sheet Flow to Buffers – provides effective water quality treatment and reduces stormwater runoff
- ▶ Grass Channels – Where applicable, promotes groundwater recharge.
- ▶ Environmentally Sensitive Development – Applying several of these techniques to low density residential development addresses groundwater recharge and water quality requirements.
- ▶ Impervious Cover Reduction (Pollution Prevention) – Site planning practices that reduce impervious cover will reduce water quality and recharge requirements for new developments.

***The 2000 Maryland Stormwater Design Manual, Model Ordinance, and related information are available on MDE's WEB Page – [www.mde.state.md.us](http://www.mde.state.md.us)***